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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,048	10/24/2005	Hans-Juergen Dobschal	P70853US0	8295
136 7590 08/01/2007 JACOBSON HOLMAN PLLC 400 SEVENTH STREET N.W. SUITE 600 WASHINGTON, DC 20004			EXAMINER BOOSALIS, FANI POLYZOS	
			ART UNIT 2884	PAPER NUMBER
			MAIL DATE 08/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/554,048

Applicant(s)

DOBSCHAL ET AL.

Examiner

Faye Boosalis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments, see pages 7-11, filed 23 May 2007, with respect to the rejection(s) of claim(s) 1-3 under 35 U.S.C. 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bokor et al (US 6,555,828 B1) in view of La Fontaine et al (US 5,498,923 A).

### ***Response to Amendment***

2. Claims 1-8 are cancelled.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bokor et al* (US 6,555,828 B1) in view of *La Fontaine et al* (US 5,498,923 A).

Regarding claim 1, Bokor discloses an apparatus for inspecting a mask (10) used in microlithography (col. 2, line 56), the apparatus comprising: a vacuum chamber (30) (col. 6, lines 11-12); illuminating means (i.e. beam line) for illuminating a mask in the vacuum chamber with extreme ultraviolet light (EUV radiation) (col. 2, lines 61-67). Bokor et al is silent with regards to a converting means for an image in radiation of a longer wavelength. La Fontaine discloses fluorescence imaging comprising conversion

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means for converting an image (51) in EUV radiation emitted by the mask (60) into an image in radiation of a longer wavelength (See Abstract, Fig. 6 and col. 6, lines 15-24); sensor means (70) for recording the image in the radiation of a longer wavelength (col. 5, lines 16-25 and col. 6, lines 25-30) and an optical interface (10) from the chamber (14) to the sensor means (detector) (See Generally Fig. 1 and col. 5, lines 16-25). Thus it would have been obvious to a person having ordinary skill in the art to modify Bokor et al. to use converting means of an image to longer wavelengths, so as to enable a more versatile apparatus and means for better optical control and inspection of the masks, as taught by La Fontaine et al

Regarding claim 10, La Fontaine discloses the conversion means comprises a scintillator (10) (col. 5, lines 8-9).

Regarding claims 11-12, La Fontaine discloses the converter means forms the optic interface (10) from the chamber (14) to the sensor (detector) and is arranged as a window in the chamber (fluorescence microscope arrangement) (See Fig. 5 and col. 5, lines 16-25).

Regarding claims 13-14, Bokor discloses the image optic means is vacuum tight and comprises lens having at least one diffractive optical element. Although Bokor et al nor La Fontaine disclose of a cement-free hybrid lens, it would have been obvious to one having ordinary skill in the art at the time the invention was made of a cement-free hybrid type lens, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

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5. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bokor et al (US 6,555,828 B1) and La Fontaine et al (US 5,498,923 A) as applied to claim 1 above, and further in view of *Brunner et al* (US 2004/0174607 A1).

Bokor et al. and La Fontaine et al. disclose all the limitations of the parent claim 1, as described above. However, Bokor and La Fontaine are silent with regards to two lens groups. Brunner discloses a microscope objective, wherein, the imaging optic means includes a first lens group having a positive refraction power (5) and a second group having a negative refraction power (6), the second lens group arranged downstream from the first lens group and diffractive optical element (11) is contained in the first lens group (See Abstract) and the imaging optic means is interchangeable in order to change imaging conditions ([0016]). Thus it would have been obvious to a person having ordinary skill in the art to modify Bokor et al. and La Fontaine et al. to use such microscope objectives as described supra, to allow for optical control of masks, as taught by Brunner et al ([0001]).

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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